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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,755	10/20/2003	Ching-Pin Wang	WANG 3200/EM	9278

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EXAMINER

MENGISTU, AMARE

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/687,755	Applicant(s) WANG ET AL.	
	Examiner Amare Mengistu	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

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## DETAILED ACTION

### *Specification*

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the recitation of claims 2 and 3 respectively ***"the cavity's opening faces directly to the bottom opening and the second lens is coaxially implemented with the photo sensor"*** and ***"the absorbing layer is coated/attached in the cavity adjacent to surface of the second lens surrounding to absorb reflecting light not directly projected to the second lens"***.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

**Applicant's Admitted Prior Art** (figs.1 and 2) in view of **TSENG** (5,969,344).

As to claims 1-6, **Applicant's Admitted Prior Art** (figs.1 and 2) discloses an optical mouse (fig.1 (5)) comprising: a light device to provide an incident light

(fig.1 (51)), a light guiding device, to guide the incident light to pass through the bottom opening and thus project to a reflective plane (fig.1 (52)), a photo sensor implemented in the optical mouse above the bottom opening to receive a reflecting light generated on the reflective plane by reflecting the incident light (fig.1 (53)). **Applicant's Admitted Prior Art** did not expressly detail having a light-absorbing layer attached around the surface of the photo sensor.

The patent of **TSENG** is cited to teach that it is well known for an optical mouse to have a photo sensor (31), which can detect or absorb the interfering light (col.2, lines 39-53, col.3, lines 5-16).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have been motivated to incorporate the light absorbing layer of **TSENG** into the optical mouse of **Applicant's Admitted Prior Art**, because this will allow the optical mouse of **Applicant's Admitted Prior Art** to prevent light superimposition and light interference and increase accuracy of signals received by the photo sensor.

As to claims 2, **Applicant's Admitted Prior Art** discloses the light guiding device comprises: a first and a second lenses (fig.1 (521,522)), at least one prism (fig.1 (523)) and a cavity formed in a bottom of the light guiding device (fig.1 (525)), such that the incident light is projected by the at least one prism to the reflective plane after being focused by the first lens, the second lens is implemented in the cavity to project the reflecting light to the photo sensor after being focused, the

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cavity's opening faces directly to the bottom opening and the second lens is coaxially implemented with the photo sensor (see, page 1 [0005]).

In regard to claim 3, **Applicant's Admitted Prior Art** (as modified by **TSENG**) the absorbing layer is coated/attached around the photo sensor (see, **TSENG** abstract) in the cavity adjacent to surface of the second lens surrounding to absorb reflecting light not directly projected to the second lens (see, figs.1 and 2 (53,522) **Applicant's Admitted Prior Art**)

As to claim 4, **Applicant's Admitted Prior Art** clearly states that the light device is a light emitting diode (see, fig.1 (51)).

As to claim 5, **TSENG** discloses a light-absorbing layer (see, col.2, lines 39-53, col.3, lines 5-16), but did not specifically state the absorbing layer is black.

However, one can pick and chose any type of light absorbing material, since **TSENG** light absorbing provide the same result as applicant's black light absorbing layer.


As to claim 6, **TSENG** also teaches that the light-absorbing layer is produced by applying to the surface adjacent to the photo sensor (see, col.2, lines 39-53, col.3, lines 5-16).

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (571) 272-7674. The examiner can normally be reached on M-F,T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Amare Mengistu  
Primary Examiner  
Art Unit 2673

AM

5/11/05